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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
KURR, JASON RICHARD				
ART UNIT		PAPER NUMBER		
2614				
NOTIFICATION DATE		DELIVERY MODE		
10/29/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

### Office Action Summary

**Application No.**

10/643,140

**Applicant(s)**

AYLWARD ET AL.

**Examiner**

JASON R. KURR

**Art Unit**

2614

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 6, 42 and 46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 42 and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date 8/31/10
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 42 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scofield (US 6853732 B2) in view of Arai et al (US 7684577)

With respect to claim 1, Scofield discloses an audio system including a plurality of channels (fig.3 #54,56) intended to be radiated in a predetermined positional relationship to a listener, comprising: a listening area (fig.3 #64) comprising a plurality of listening spaces (fig.3 "spaces occupied by listeners #26"); a first directional local audio device (fig.3 #58) comprising a radiating element radiating sound waves that destructively interfere more in some directions than the sound waves destructively interfere in other directions, the directional audio device being positioned in a first of said listening spaces (fig.3), close to a head of the listener (fig.3 #26) for radiating first sound waves corresponding to a first of said channels (fig.3 #58, "L-channel"); and a second nonlocal audio device (fig.3 #52), positioned inside said listening area and outside said listening spaces, distant from said first of said listening spaces (col.4 ln.58-63), for radiating sound waves corresponding to said first of said channels (col.4 ln.21-25). It is implied that destructive interference resultant from two separate sound

sources (#58 and 60) would not be equal at all points in space, therefore the sound waves would destructively interfere more in some directions when compared to others. Scofield does not disclose expressly wherein the first directional local audio device comprises at least two radiating elements for radiating sounds of a first channel or wherein the directional audio device is at a fixed location.

Arai discloses a directional local audio device comprising at least two radiating elements (fig.5 #3L1, 3L2, 3L3) for directionally radiating sounds of a first channel (fig.5 "Left 3 Channel Signal"), wherein the directional audio device is mounted within a headrest (fig.5 #9) at a fixed location within a vehicle. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the headrest mounted directional array of Arai in place of the head worn local audio device #58 of Scofield. The motivation for doing so would have been to eliminate the need for a head worn device such that the system may be safely used within a traveling vehicle. For example, there would be no obstruction of a drivers view by a head worn unit.

With respect to claim 2, Scofield discloses an audio system in accordance with claim 1, wherein said directional audio devices comprise a plurality of acoustic drivers (Arai: fig.5 #3L1-3L3, 3R1-3R3), wherein said acoustic drivers are positioned and arranged to radiate sound waves that interfere destructively at a first predetermined location in space and to interfere nondestructively at a second predetermined location in space (Arai: fig.6).

With respect to claim 6, Scofield discloses an audio system in accordance with claim 1, wherein said listening area comprises a vehicle passenger compartment and

said listening locations comprise seating locations within said vehicle passenger compartment (Arai: fig.3).

With respect to claim 42, Scofield discloses an audio system including a plurality of channels (fig.3 #54,56) intended to be radiated in a predetermined positional relationship to a listener, comprising: a listening area (fig.3 #64) comprising a plurality of listening spaces (fig.3 "spaces occupied by listeners #26"); a first local audio device (fig.3 #58) comprising a radiating element radiating sound waves that destructively interfere more in some directions than the sound waves destructively interfere in other directions, the directional audio device being positioned in a first of said listening spaces, close to a head of the listener (fig.3 #26) for radiating first sound waves corresponding to a first of said channels (fig.3 #58, "L-channel"); and a second nonlocal audio device (fig.3 #52), positioned inside said listening area and outside said first of said listening spaces, distant from said first of said listening spaces (col.4 ln.58-63), for radiating sound waves corresponding to said first of said channels (col.4 ln.21-25). It is implied that destructive interference resultant from two separate sound sources would not be equal at all points in space, therefore the sound waves would destructively interfere more in some directions when compared to others. Scofield does not disclose expressly wherein the first directional local audio device comprises at least two radiating elements for radiating sounds of a first channel or wherein the directional audio device is at a fixed location.

Arai discloses a directional local audio device comprising at least two radiating elements (fig.5 #3L1, 3L2, 3L3) for directionally radiating sounds of a first channel (fig.5

"Left 3 Channel Signal"), wherein the directional audio device is mounted within a headrest (fig.5 #9) at a fixed location within a vehicle. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the headrest mounted directional array of Arai in place of the head worn local audio device #58 of Scofield. The motivation for doing so would have been to eliminate the need for a head worn device such that the system may be safely used within a traveling vehicle. For example, there would be no obstruction of a drivers view by a head worn unit.

With respect to claim 46, Scofield discloses an audio system in accordance with claim 42, wherein said listening area comprises a vehicle passenger compartment and said listening locations comprise seating locations within said vehicle passenger compartment (Arai: fig.3).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 42 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rech et al (US 5997091) discloses a headrest arrangement for a motor vehicle seat.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON R. KURR whose telephone number is (571)272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason R Kurr/

Examiner, Art Unit 2614

/VIVIAN CHIN/

Supervisory Patent Examiner, Art Unit 2614